

NOTES ON CERTAIN AMPHIPODS FROM THE GULF OF MEXICO, WITH DESCRIPTIONS OF NEW GENERA AND NEW SPECIES.

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The following notes are a report on a portion of the amphipods from the Gulf of Mexico in the collection of the United States National Museum. These collections are from several sources and extend over a long period of years. The greater part of them have not yet been examined. Those described below were taken chiefly by the steamers *Fish Hawk* and *Albatross* of the United States Bureau of Fisheries.

Tribe GAMMARIDEA.

Family LYSIANASSIDÆ.

*LYSIANOPSIS ALBA* Holmes.

*Fish Hawk* station 7402, Pigeon Key Lake, 9 feet, January 7, 1903; 11 specimens.

*Fish Hawk* station 7431, Grassy Key Lake, 8 feet, January 28, 1903; 2 specimens.

*Albatross* stations 2369-2374, between Delta of Mississippi and Cedar Keys, 25-27 fathoms.

Key West, below low tide among algæ; Henry Hemphill; 12 specimens.

Family AMPELISCIDÆ.

*AMPELISCA HOLMESII* Pearse.

*Albatross* stations 2369-2374, between Delta of Mississippi and Cedar Keys, 25-27 fathoms.

Punta Rassa, Charlotte Harbor; Henry Hemphill, February, 1884; 34 specimens.

Family HAUSTORIIDÆ.

*HAUSTORIUS ARENARIUS* (Slabber).

Pensacola; *Albatross*, February 3, 1885; 16 specimens.

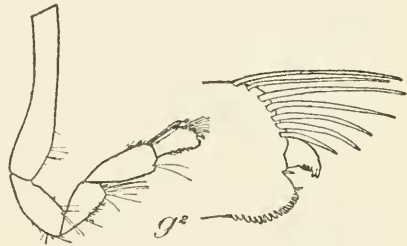


FIG. 1.—*LYSIANOPSIS ALBA*. ♂, SECOND GNATHOPOD.

## Family LEUCOTHOIDÆ.

## LEUCOTHOË SPINICARPA (Abildgaard).

*Albatross* stations 2369–2374, between Delta of Mississippi and Cedar Keys; station 2405, lat. 28° 45' 00'' N.; long. 85° 02' 00'' W.; station 2413, lat. 26° 00' 00'' N.; long. 82° 57' 30'' W.; in 25–27, 30, 24 fathoms, respectively.

*Fish Hawk* stations 7397, 7431, 7476, and the stations on January 29, 1903, Florida Bay, in 13, 8, 9, 7–11½ feet. Total, 32 specimens.

## Family ANAMIXIDÆ.

## ANAMIXIS HANSENI Stebbing.

*Albatross* stations 2369–2374, between Delta of Mississippi and Cedar Keys, 25–27 fathoms; 5 specimens.

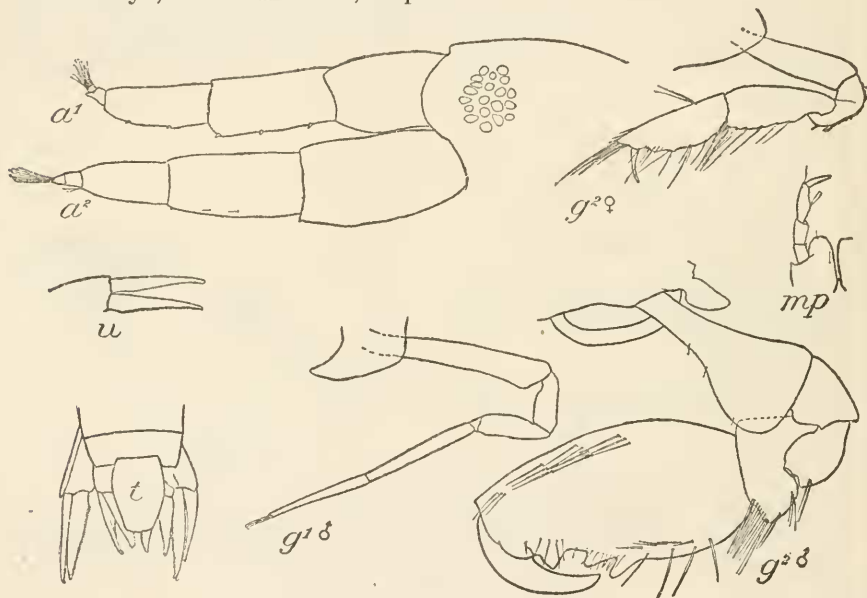


FIG. 2.—COLOMASTIX PUSILLA.  $a^1$ , FIRST ANTENNA;  $a^2$ , SECOND ANTENNA;  $g^1$ , FIRST GNATHOPOD;  $g^2$ , SECOND GNATHOPOD;  $mp$ , MAXILLIPED;  $t$ , TELSON;  $u$ , UROPOD.

## Family COLOMASTIGIDÆ.

## COLOMASTIX PUSILLA Grube.

*Albatross* stations 2369–2374, between Delta of Mississippi and Cedar Keys, 25–27 fathoms; 2 females, 1 male.

## Family GAMMARIDÆ.

## ELASMOPUS RAPAX A. Costa.

*Fish Hawk* station 7402, Pigeon Key Lake, 9 feet; 4 specimens.

Florida Bay; *Fish Hawk*, January 29, 1903, 7–11½ feet; 8 specimens.

Key West, below low tide among algæ; Henry Hemphill; 21 specimens.

*MELITA DENTATA* (Krøyer).

Cameron, Louisiana; L. R. Cary; several specimens.

*MELITA NITIDA* Smith.

Old stump in Mussel Bayou; *Fish Hawk*, February 23, 1898; 1 male.

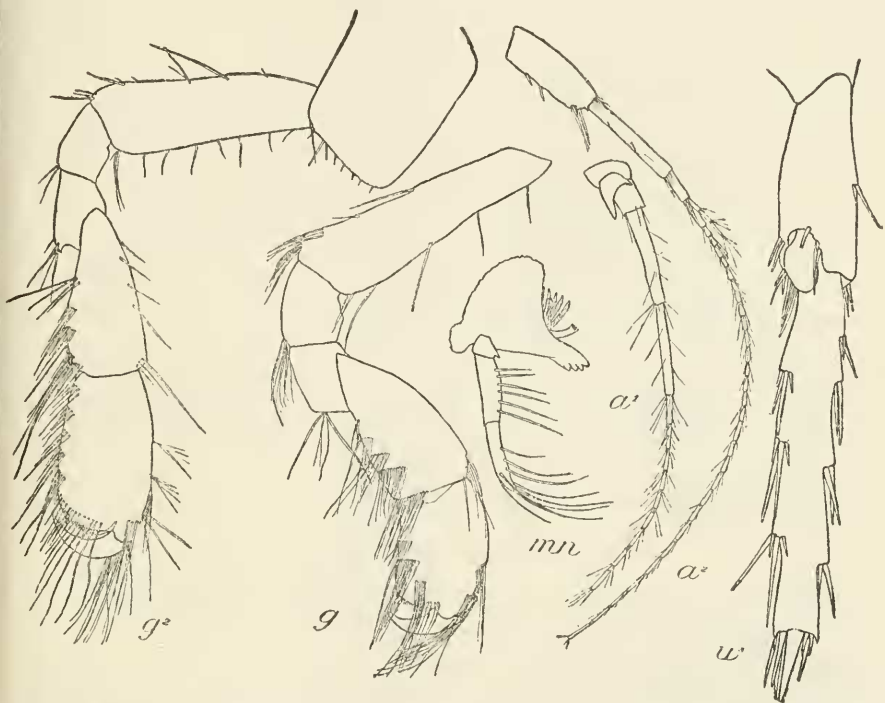


FIG. 3.—*MELITA DENTATA*. *a*<sup>1</sup>, FIRST ANTENNA; *a*<sup>2</sup>, SECOND ANTENNA; *g*, FIRST GNATHOPOD; *g*<sup>2</sup>, SECOND GNATHOPOD; *mn*, MANDIBLE; *u*<sup>3</sup>, THIRD UROPOD.

*MELITA FRESNELII* (Audouin).

*Albatross* stations 2369–2374, between Delta of Mississippi and Cedar Keys, 25–27 fathoms; 2405, lat. 28° 45' 00'' N.; long. 85° 02' 00'' W., 30 fathoms; 2413, lat. 26° 00' 00'' N.; long. 82° 57' 30'' W., 24 fathoms.

*Fish Hawk* stations 7416, 10½ feet; 7431, 8 feet; Florida Bay, all stations on January 29, 1903, 7–11½ feet.

Total, 13 males, 32 females.

Family TALITRIDÆ.

*ORCHESTIA GRILLUS* (Bosc).

Margin of Matagorda Bay, Texas; J. D. Mitchell, January, 1902; several specimens of both sexes; same locality and collector, April 14, 1902, under driftwood, at Well Camp, Alligator Head.

## ORCHESTIA PLATENSIS Krøyer.

Cameron, Louisiana; L. R. Cary; 1 specimen.

## TALORCHESTIA LONGICORNIS (Say).

Chandeleur Islands, Louisiana; L. R. Cary.

## Family AORIDÆ.

## LEMBOPSIS, new genus.

Body slender. Side plates rather shallow, rounded. Antenna 2 about half as long as 1; accessory flagellum well developed. Lower lip with mandibular processes strongly produced. Maxilla 1 with inner plate small and bearing one apical seta; palp slender, second segment with slender spines at tip. Maxillipeds with inner and outer plates well developed, no teeth but many setæ on inner plate; finger of palp rather stout, exceeding preceding segment in length. Gnathopod 1 in male: fifth and sixth segments stout, both armed on ventral side with a strong spinous process; finger overlapping the palm. Peræopods 3-5 with the second segment not very widely expanded; fourth longer than third, fifth much longer than fourth. Uropod 3: rami subequal, much longer than peduncle.

*Type of the genus.*—*Lembopsis spinicarpus*.

## LEMBOPSIS SPINICARPUS, new species.

Rostrum small; sinus for first antenna deep, extending almost as far as the posterior corner of the eye. Eyes rounded but with antero-posterior axis slightly elongated.

First antenna almost as long as body; first segment of peduncle longer than head; antepenultimate segment one-fourth longer than first; ultimate segment one-fourth as long as antepenultimate; flagellum 23-25-segmented; accessory flagellum 7-segmented. Second antenna reaching the tip of accessory flagellum of first; last two segments of peduncle subequal in length; flagellum 10-segmented.

Mandible with third segment of palp longer than second and strongly ciliated on inner margin. Maxilla 1: inner plate with one plumose seta; outer plate with eight spines; palp slender. Maxillipeds: inner and outer plates broad and well armed. Lower lips with rather long mandibular processes.

Gnathopod 1 of male: second segment devoid of long setæ; fifth segment slightly more than half as long as sixth, broad, thick; each produced into a strong acute process on ventral margin; a deep sinus between spinous process on sixth segment and palm, which is straight; dactyl long, curved, finely denticulate on inner margin. Gnathopod 2: fifth and sixth segments oval and densely covered

with long hairs on both margins; fifth segment slightly longer than sixth; palm slightly oblique; finger finely denticulate on inner margin. Gnathopods of female smaller than in male; first, with palm oblique and bearing a small tooth at its distal end; second, with palm nearly transverse and bearing a similar but slightly smaller tooth.

Peræopods 1 and 2 glandular. Peræopod 5 much longer than others.

Uropods 1-3 armed with spines, those on last more slender than rest; peduncle of uropod 3 short, inner ramus slightly longer than outer. Telson about as broad as long, with a semicircular notch at tip, two apical bristles on either side.

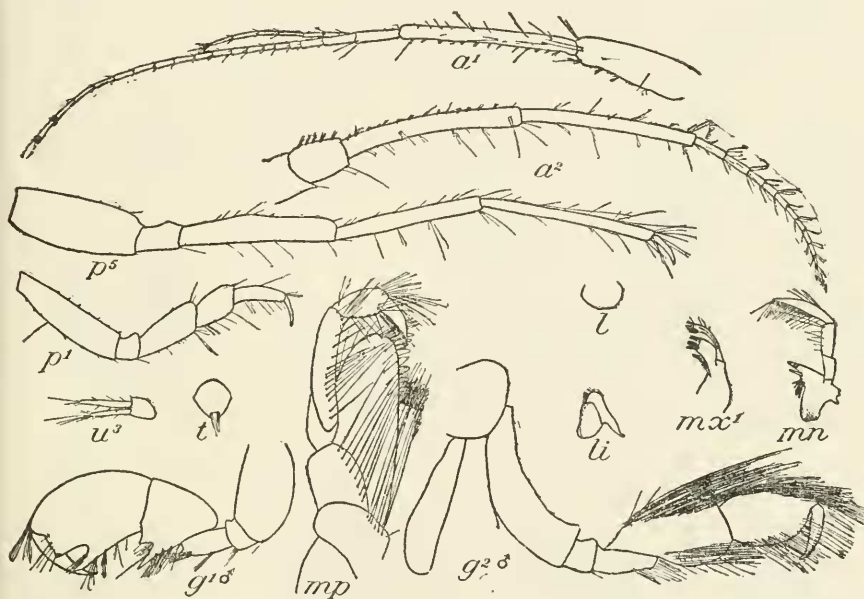


FIG. 4.—LEMBOPSIS SPINICARPUS.  $a^1$ , FIRST ANTENNA;  $a^2$ , SECOND ANTENNA;  $g^1$ , FIRST GNATHOPOD;  $g^2$ , SECOND GNATHOPOD;  $l$ , UPPER LIP;  $li$ , LOWER LIP;  $mn$ , MANDIBLE;  $mp$ , MAXILLIPED;  $mx^1$ , FIRST MAXILLA;  $p^1$ , FIRST PERÆOPOD;  $p^5$ , FIFTH PERÆOPOD;  $t$ , TELSON;  $u^3$ , THIRD UROPOD.

Length, 10 mm.

Described from two males and four females taken by Henry Hemphill in 1885, among algæ below low tide mark at Key West, Florida. Other specimens appeared in a collection made by the *Fish Hawk* at station 7431, Grassy Key, in 8 feet, and station 7397, Big Spanish Key Channel, in 13 feet.

*Type*.—Cat. No. 13534, U.S.N.M.

LEMBOS SMITHI (Holmes).

*Albatross* stations 2369-2374, Delta of Mississippi to Cedar Keys, 25-27 fathoms.

## Family PHOTIDÆ.

CHEVALIA MEXICANA, new species.

Body smooth without spines or teeth, slender. Head longer than first two segments; body segments progressively longer posteriorly. Eyes round; ocular lobe rounded. Epimera shallow, and none of them excavate nor produced.

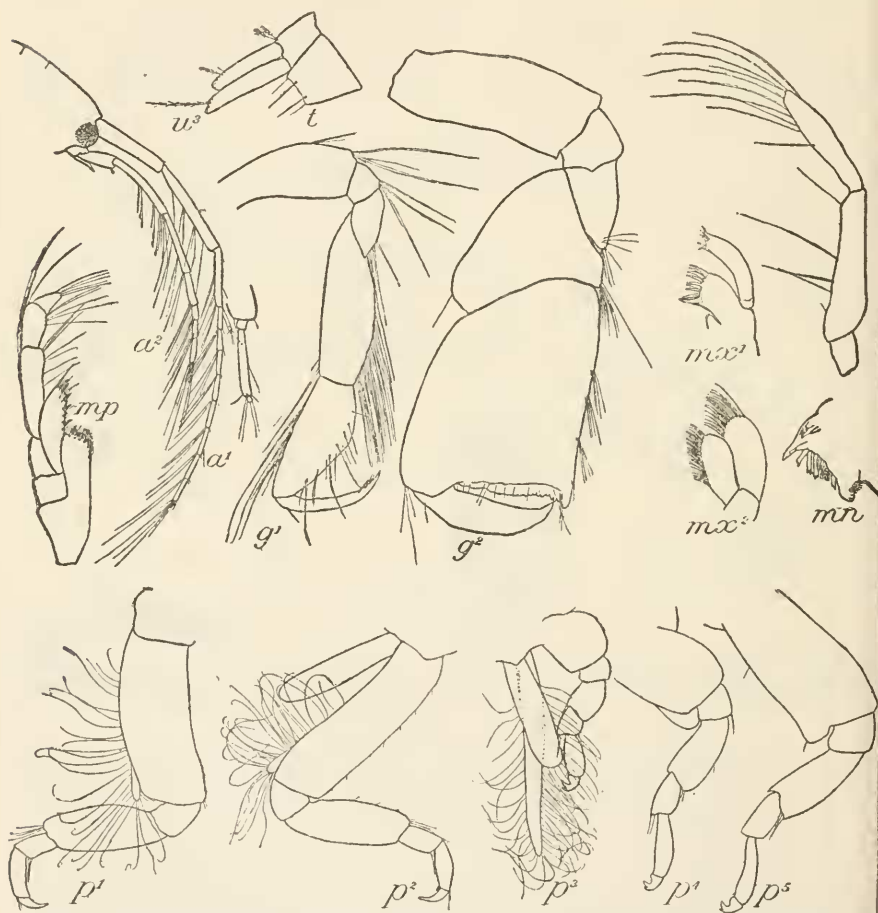


FIG. 5.—CHEVALIA MEXICANA. *a*<sup>1</sup>, FIRST ANTENNA; *a*<sup>2</sup>, SECOND ANTENNA; *g*<sup>1</sup>, FIRST GNATHOPOD; *g*<sup>2</sup>, SECOND GNATHOPOD; *mn*, MANDIBLE; *mp*, MAXILLIPED; *mx*<sup>1</sup>, FIRST MAXILLA; *mx*<sup>2</sup>, SECOND MAXILLA; *p*<sup>1</sup>, FIRST PEREPOD; *p*<sup>2</sup>, SECOND PEREPOD; *p*<sup>3</sup>, THIRD PEREPOD; *p*<sup>4</sup>, FOURTH PEREPOD; *p*<sup>5</sup>, FIFTH PEREPOD; *t*, TELSON; *u*<sup>3</sup>, THIRD UROPOD.

First antenna about two-thirds length of body; first segment of peduncle about as long as third; flagellum 8-segmented; accessory flagellum with a short basal segment, a longer middle, and a minute terminal segment. Second antenna half as long as first; first seg-

ment of peduncle one-third as long as second, second one-half third; flagellum 5-segmented, longer than last two peduncular segments.

Mandibles small, shorter than second segment of palp; cutting edge double; molar tubercle prominent and narrow; palp reaching to middle of third segment of second antenna, first segment small, second and third subequal.

Maxillipeds with inner plate reaching end of first segment of palp, spinous at tip; outer plate narrower, reaching middle of second segment of palp, with spines on inner margin longer and slenderer toward tip; first and third segments of palp subequal, second twice as long, fourth more than half as long as third, the apex rounded and setose.

First gnathopods with side plates small, front angle rounded; basal segment slightly shorter than carpus, curved; carpus longer than propodus; palm oblique, straight, poorly defined; dactyl three times as long as propodus.

Second gnathopods with side plates small, rounded; basal segment equal to next three in length, twice as wide as merus; propodus one-third longer than triangular carpus; palm transverse, defined by a strong tooth inside which is a slight notch to receive the dactyl; dactyl stout, curved.

First and second peræopods longer than second gnathopods; stout side plates small and rounded, basal segment longer than next three, with anterior margin convex in first and nearly straight in second; merus nearly as long as combined ischium, carpus and propodus, twice as wide as last two; dactylus half as long as propodus. Third peræopod hardly reaching end of basal segment of second; basal segment about as wide as long, front margin straight; ischium a little shorter than carpus; merus subequal to propodus; dactyl reversed, with a secondary tooth. Fourth peræopod like third, but longer. Fifth longer than fourth; the basal segment straight, twice as long as wide, and with anterior distal angle forming a rounded right angle; otherwise similar to fourth. Last peræopod not reaching beyond third pleon segment.

First uropod with peduncle subequal to outer ramus, which is one-fifth shorter than the inner, obliquely truncated at tip and armed with a group of short, blunt spines; inner ramus styliform, curved, spinulous on proximal half of outer margin. Second uropod similar to first; outer ramus shorter than peduncle, which is subequal to inner ramus; inner ramus not spinulous on margin. Third uropod with peduncle shorter than either ramus; inner ramus longer than outer; both rami rounded and setose on outer margin at tips.

Telson truncate at tip; with two setæ at distal angles and four on upper surface.

Length, 6 mm.

Seventy-one specimens were collected by the Fisheries steamer *Albatross* between the Delta of the Mississippi and Cedar Keys, stations 2369-2374, in 25 to 27 fathoms of water.

*Type*.—Cat. No. 43638, U.S.N.M.

Family AMPITHOIDÆ.

AMPITHOË LONGIMANA (Smith).

Florida Bay at a *Fish Hawk* station on January 29, 1903, 7-11½ feet; 1 female.

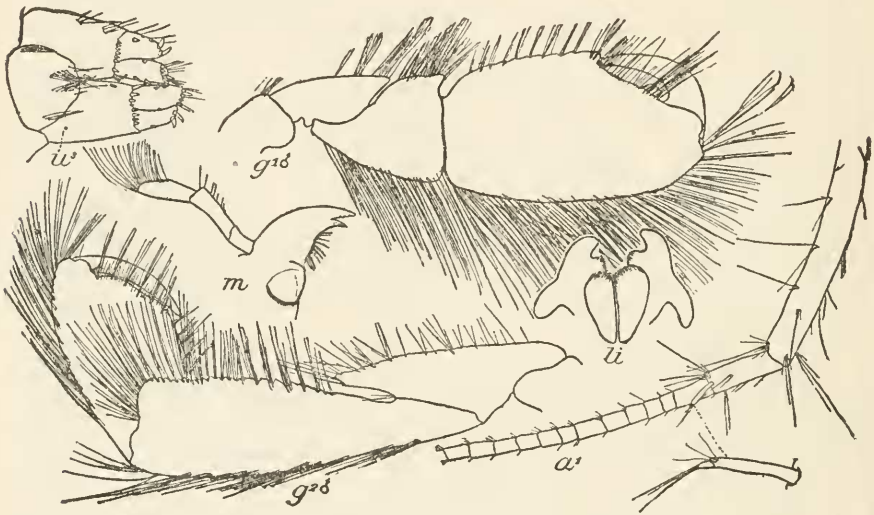


FIG. 6.—GRUBIA COMPTA. *a*<sup>1</sup>, FIRST ANTENNA; *g*<sup>1</sup>, FIRST GNATHOPOD; *g*<sup>2</sup>, SECOND GNATHOPOD; *li*, LOWER LIP; *m*, MANDIBLE; *u*<sup>3</sup>, THIRD UROPOD.

GRUBIA COMPTA Smith (?).

Harbor Key, Florida; Union College collection (No. 798); 1 specimen. Several specimens from Key West, Florida; below low tide among algæ; H. Hemphill. Some in the collections of the Fisheries steamer *Fish Hawk* in Florida Bay on January 29, 1903, 7-11½ feet.

All these specimens differ from Holmes's figures. The first gnathopods of the male are larger than the second; the propodus of the second gnathopod is shorter but more stocky than the carpus; there are not triangular acute teeth at the post-lateral angles of abdominal segments 2 and 3.

GRUBIA, sp.?

Twenty-one specimens of a second species of this genus came from Key West, Florida; H. Hemphill, collector.



## Family COROPHIIDÆ.

## CERAPUS TUBULARIS Say.

*Fish Hawk* station 7292, Gulf of Mexico, off Northwest Channel, 10½ fathoms; several specimens.

## UNCIOLA LAMINOSA, new species.

Body dorsally broad, flattened. Head with rostrum distinct, acute; lateral margins straight, posterior angles rounded. Side plates very shallow, first and second with front angles forming strong acute spines, third and fourth somewhat angulate in front but not

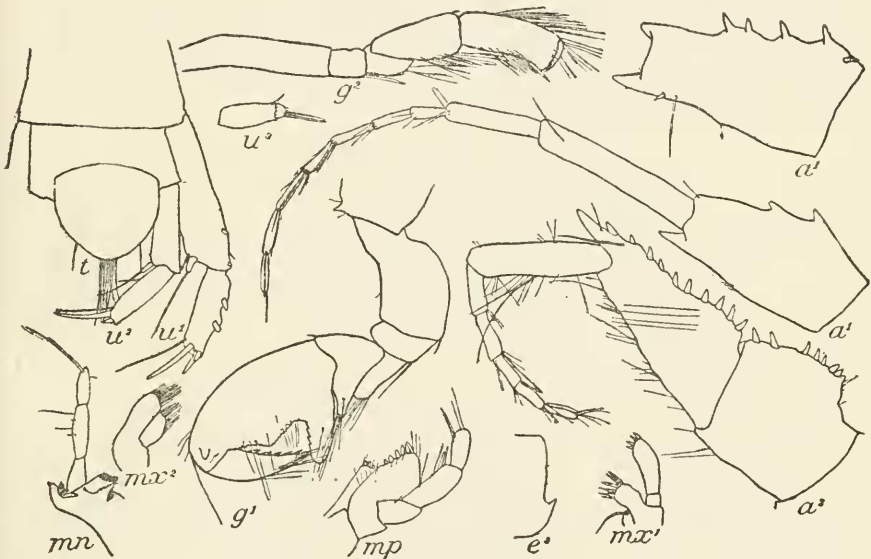


FIG. 7.—UNCIOLA LAMINOSA.  $a^1$ , FIRST ANTENNA;  $a^2$ , SECOND ANTENNA;  $e^3$ , THIRD EPIMERITE;  $g^1$ , FIRST GNATHOPOD;  $g^2$ , SECOND GNATHOPOD;  $mn$ , MANDIBLE;  $mp$ , MAXILLIPED;  $m^1$ , FIRST MAXILLA;  $m^2$ , SECOND MAXILLA;  $t$ , TELSON;  $u^1$ , FIRST UROPOD;  $u^2$ , SECOND UROPOD;  $u^3$ , THIRD UROPOD.

spiny. Pleon segment 3, postero-lateral angle acute, with a shallow sinus above. Eyes oval.

First antenna elongate, second segment about equal to first in length, third more than half as long as second; flagellum not as long as peduncle, 7-segmented, accessory flagellum unknown except for one segment (perhaps 1-segmented). Second antenna with the two basal segments laminar and spiny on outer margin; first segment less than two-thirds as long as second, third shorter than second and slender; flagellum 5-segmented. First maxilla with nine teeth on outer plate and four at tip of palp. First gnathopod with second segment of medium width; fifth segment short, broad, produced on posterior margin; sixth very broad, with basal process projecting

much beyond that of the fifth segment, its apex rounded; palm sinuate, crenulate, forming a deep sinus just beyond the basal process; finger reaching basal process of sixth segment, stout, conical, teeth on inner margin prominent. Second gnathopod with fifth segment shorter than sixth, both setose; palm transverse; finger slender, not quite so long as palm.

Peræopods 1-5, slender, second segment little expanded.

Uropods 1 and 2 elongate, armed with stout spines on outer margin; inner ramus minute with one long apical seta. Uropod 3 with ramus longer than peduncle (the figure shows only the ramus). Telson rounded, entire.

Length, 4.2 mm.

Seven specimens were taken by the *Albatross* at stations 2369-2374, between Delta of Mississippi and Cedar Keys; 25 to 27 fathoms. Type-locality, Punta Rassa, Charlotte Harbor; H. Hemphill; 1 specimen.

*Type*.—Cat. No. 43639, U.S.N.M.

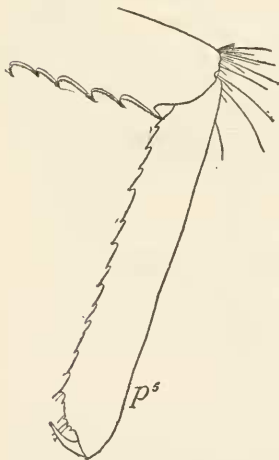


FIG. 8.—*CYSTISOMA SPINOSUM*.  $\bar{p}^5$ ,  
FIFTH PEREPOD.

*ERICTHONIUS RUBRICORNIS* (Stimpson).

*Albatross* stations 2369-2374, between Delta of Mississippi and Cedar Keys; 25-27 fathoms, 1 male; station 2388 (lat.  $29^{\circ} 24' 30''$  N.; long.  $88^{\circ} 01' 00''$  W.), 35 fathoms; 5 males, 12 females.

Tribe HYPERIIDEA.

*CYSTISOMA SPINOSUM* (J. C. Fabricius).

*Albatross* station 2392 (lat.  $28^{\circ} 47' 39''$  N.; long.  $87^{\circ} 21' 00''$ ), 724 fathoms, 1 specimen, 47 mm. long. Agrees with Stebbing's description except for the fact that the first antennæ are very long—31 mm.

*PHRONIMA SEDENTARIA* (Forskål).

*Fish Hawk* station 7284, Gulf Stream, off Key West, February 19, 1902, 245 fathoms, 2 specimens; station 7299, Gulf Stream, off Key West, February 22, 1902, a female carrying eggs, 109 fathoms.

*PHROSINA SEMILUNATA* Risso.

*Albatross* station 2393, between Delta of Mississippi and Cedar Keys, 4 specimens; station 2398, same locality, 1 specimen.

Tribe CAPRELLIDEA.

*CAPRELLA GEOMETRICA* Say.

*Fish Hawk* station 7292, Gulf of Mexico, off Northwest Channel,  $10\frac{1}{4}$  fathoms.

CAPRELLA, sp.?

*Albatross* stations 2369-2374, between Delta of Mississippi and Cedar Keys, 25-27 fathoms, 1 female.

PROTELLOPSIS STEBBINGII Pearse.

*Albatross* stations 2369-2374, between Delta of Mississippi and Cedar Keys, 25-27 fathoms, 1 female.